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May 23, 2018

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United States Environmental Protection Agency, Region 2
290 Broadway, 17th Floor
New York, NY 10007-1866

Re: Notice of Intent with Regard to Compliance of Administrative Order for a Remedial Design Index No. CERCLA-02-2018-2015; New Cassel/Hicksville Contaminated Groundwater Superfund Site, OU1

Dear Ms. Kivowitz:

On March 22, 2018 the United States Environmental Protection Agency ("EPA") issued a Unilateral Administrative Order ("UAO") for Remedial Design to our client, IMC Eastern Corporation ("IMC"). The UAO was amended on May 17, 2018 to add additional parties and became effective on May 21, 2018.

The UAO requires IMC, along with the other Respondents,[1] to perform a Pre-Design Investigation and develop a Remedial Design for Operable Unit 1 ("OU1") for the New Cassel/Hicksville Groundwater Contamination Superfund Site (*the* "Site"). Section IX of the UAO requires IMC to notify EPA in writing whether [IMC] intends to comply with the UAO. In accordance with that provision, IMC is notifying EPA that it does not intend to comply with the UAO for the reasons including, but not limited to, those set forth below. In addition, nothing in this letter shall be construed to limit any rights, claims and defenses IMC may have now or have in the future.

[1] Other respondents to the UAO include 101 Frost Street, LP, 570 Properties, Inc., Arkwin Industries, Inc., Atlas Graphics, Inc., Barouh Eaton Allen Corp., Grand Machinery Exchange, Inc., HDP Printing Industries, Corp., Island Transportation Corp., Nest Equities, Inc., Next Millennium Realty, LLC, Patel Trust July 29, 1977, Tischcon Corporation, Utility Manufacturing Co., Inc., and William Gross.

Sufficient Cause

Section IX, paragraph 50, of the UAO requires IMC provide written notice describing any "sufficient cause" defenses IMC may have under CERCLA Section 106(b) and 107(c)(3) for its intent not to comply with the UAO. Since CERCLA contains no such provisions authorizing EPA to require such defenses and/or limit those defenses solely to information available prior to the effective date of the UAO, IMC objects to this requirement. Consequently, IMC reserves its right to raise any defense existing or known to IMC at the time of this notice or not, including any "sufficient cause" defense and/or information.

Section 9606(b) of CERCLA provides that where a party has "sufficient cause" to willfully violate or fail or refuse to comply with a UAO, that party will not be subject to civil damages. Thus, where the party can show "sufficient cause" for its refusal to comply with the UAO, the statute prohibits the imposition of penalties. A party has "sufficient cause" if they have an objectively reasonable basis for believing that the UAO was invalid or inapplicable to them. *See* Solid State Circuits, Inc. v. U.S.E.P.A., 812 F.2d 383, 391 (8th Cir. 1987). In addition, "sufficient cause" is met for any good faith challenge where reasonable grounds to contest the UAO exists. *See* General Electric Co. v. Jackson, 610 F.3d 110 (D.C. Cir. 2010).

IMC has sufficient cause to refuse to comply with the UAO because certain aspects of EPA's remedy selection were arbitrary, capricious and not in accordance with the law

For the following reasons and as further detailed in the attached comments submitted previously to EPA on April 25, 2018 and prepared on behalf of IMC and Island Transportation Corp. ("ITC") by Gradient, IMC believes it has sufficient cause to refuse to comply with the UAO. On May 17, 2018, EPA responded to IMC and ITC's comments, but simply reiterated its previous, inadequate responses to prior comments.

There are significant deficiencies associated with EPA's UAO for Remedial Design at the New Cassel/Hicksville Groundwater Contamination (NCHGW) Superfund Site. Specifically, EPA's process for selecting a remedy at the Site has not conformed to the requirements of the National Contingency Plan (NCP). EPA did not conduct a true Remedial Investigation (RI) for OU1, as required by the NCP, but instead decided to call the Data Gap Analysis Memorandum the Supplemental RI. Consequently, conditions at OU1 have not been adequately characterized, a requirement of the NCP. The Feasibility Study (FS) is flawed and inconsistent with the NCP because it presents and evaluates groundwater remedial alternatives for OU1 groundwater plumes that have not been adequately characterized. In addition, in the development of the Conceptual Site Model (CSM) for OU1, EPA ignored more than 30 years of data, resulting in a CSM that is fundamentally flawed; EPA's Pre-Design Investigation Workplan (PDI, Attachment 1 to the UAO), which fails to address known and existing data gaps within

OU1, is evidence of the flawed CSM. Finally, the selected remedy in the Record of Decision (ROD; Attachment 3 to the UAO; EPA Region II, 2013) is inconsistent with the NCP because EPA has not adequately demonstrated that the remedy will be effective from an overall performance and cost standpoint, two specific evaluation criteria required by the NCP. Overall, the Site has not been adequately characterized, a bona fide RI was not conducted, EPA arbitrarily ignored 30 years of data, the remedy selection process has not complied with the NCP framework, and the flawed CSM is expected to result in an ineffective remedial design and a failed remedy. These fundamental flaws cannot be corrected through the various iterations EPA contemplates during the PDI.

1. EPA's Remedial Design is not in compliance with the NCP

The fundamental requirements of the NCP, the performance of a Remedial Investigation and Feasibility Study ("RI/FS") – the critical processes for assessing and evaluating remedial alternatives – have not been met at OU1. EPA has not incorporated or even entertained over 30 years of crucial data necessary to adequately characterize the Site for its use in developing and evaluating effective remedial alternatives to ensure a cost-effective and environmentally-protective remedy for the Site. At the core, data critical to understand Site conditions and develop an accurate Conceptual Site Model ("CSM") were arbitrarily ignored over the insistence and repeated attempts of IMC and its consultants for EPA to incorporate such data into the development of the CSM. As a result of EPA's use of the inaccurate CSM, Site conditions have been grossly mischaracterized thereby undermining the entire RI/FS process. Consequently, the FS is now flawed and inconsistent with the National Contingency Plan ("NCP") because it presents and evaluates groundwater remedial alternatives for OU1 groundwater plumes that have not been adequately characterized.

A. EPA did not conduct a compliant RI for OU1

EPA's own environmental consultant, Lockheed Martin Technology Services (Lockheed Martin), was asked to review and summarize historical environmental data collected at sites that could have been affecting groundwater quality within the Site and to prepare a scoping memorandum recommending additional data that needed to be collected to fill data gaps. For each of these sites and/or areas, Lockheed Martin summarized the available data, identified a number of substantial data gaps, and developed a detailed list of additional data that needed to be collected. A number of the data gaps were related to site characterization and dealt with developing an adequate understanding of conditions at the Site – the fundamental goal of the RI, pursuant to the NCP.

EPA ignored their own consultant's recommendation that additional data were needed to adequately characterize Site conditions. Instead of filling these data gaps, EPA decided to call this Data Gap Analysis Memorandum a Supplemental RI, decided that no additional data were needed, and

proceeded to conduct a human health risk assessment and FS, which were finalized just days after the Supplemental RI. In addition, EPA decided to disregard the contribution of groundwater contamination from the other sites to OU1, such as the former Sylvania and General Instrument sites. It should be noted that the former Sylvania and General Instrument sites are located northeast of OU1 and their historic operations have resulted in an undefined plume that continues to migrate into OU1. EPA's decisions not to undertake an RI and to ignore these sites that have resulted in the Upgradient Plume (which continues to flow into OU1) are inconsistent with the framework put forth in the NCP, for the following reasons:

a. Groundwater quality data available at the time of the Lockheed Martin evaluation indicated that the Upgradient Plume was flowing into OU1. The Lockheed Martin report clearly stated that an "RI/FS" needed to be conducted at these potential upgradient sources and that the southern and western extents of the off-property groundwater contamination – the portion of the plume that migrates into OU1 – needed to be defined. For example, the "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" states that "[b]ecause of the uncertainties associated with subsurface migration, identifying background levels, and determining if there is a contribution from other sources, sampling should also be conducted in the area perceived to be upgradient from the contaminant source" (EPA, 1988). Thus, without a sufficient understanding of the spatial and vertical extent of this Upgradient Plume (both within and upgradient of OU1), conditions in OU1 cannot be adequately characterized, and as a result, a requirement of the NCP has not been met.

b. The groundwater quality data available at the time of the Lockheed Martin evaluation (which EPA decided to call the Supplemental RI report) and the FS were inadequate for characterizing conditions in OU1. In addition to the spatial and vertical extents of the Upgradient Plume being undefined within OU1 (discussed above), the Lockheed Martin report also addressed existing data gaps and concluded that a network of monitoring wells should be installed further north and south of the NCIA Off-property Groundwater Area to define the extent of groundwater contamination, specifically, within OU1 and to the north and south of OU1. EPA's failure to collect these data resulted in the Site not being adequately characterized, a key NCP requirement.

c. The costs of the selected remedy will not be proportional to its overall effectiveness. The remedy selected for OU1 is expected to fail because the groundwater flow direction and the extent of groundwater contamination has not been defined, and as a result groundwater contamination throughout much of OU1 will continue to migrate, unaffected by the proposed remedy. As a result of continuing contaminant migration, reduction in mobility and long-term effectiveness will not be achieved (NCP 300.430[f][1][i][B]). Thus, the remedy costs

will be extremely high relative to its overall effectiveness and will violate a requirement of the NCP (NCP 400.430[f][1][ii][D]).

EPA's decision not to conduct a comprehensive RI for OU1 is inconsistent with the NCP and has resulted in an inadequate site characterization, an essential element for the design of an effective remedy.

B. EPA's FS is flawed and inconsistent with the NCP

Adequate groundwater characterization is critical for assessing and evaluating each potential remedial alternative using these FS criteria. Absent an adequate characterization, assessment of whether the remedy is protective of human health and the environment is unknown, including whether it was installed in the correct location, whether a remedy complies with ARARs, whether it is effective and permanent, whether it reduces toxicity, mobility, and volume, and its relative cost without accurately knowing where the groundwater plumes are located and where the remedy should be installed. Thus, if the extent and delineation of the groundwater plumes that are intended for remediation are not characterized adequately, the FS cannot meet NCP requirements because the NCP-specified evaluation criteria cannot be assessed.

Within OU1, groundwater plumes have not been adequately characterized. The inadequate groundwater characterization is evidenced by the starkly different plume depictions presented in the RI and the FS, two reports both prepared by US federal government contractors, that use the same available data, and are dated just days apart. The RI report presents depictions of tetrachloroethylene (PCE) and trichloroethylene (TCE) groundwater plumes within OU1 and the surrounding areas in Figures 8 and 9 (Bolduc, 2013). These plume depictions present the extent of the groundwater plumes at various depths in excess of 100 µg/L and are based on groundwater samples collected in 2011 and earlier. The FS report presents the PCE and TCE groundwater plume depictions within OU1 in Figures 3-2 and 3-3 (HDR/O'Brien & Gere Joint Venture, 2013). Important differences exist between the RI and FS plume depictions including, the OU1 Eastern Plume in the RI is significantly larger than that portrayed in the FS, since groundwater flow is not constrained by the "imaginary" boundaries of OU1, the RI plume correctly includes data from within the NCIA and the Upgradient Plume to better illustrate overall plume extents and migration patterns within OU1, the adjacent areas, and their interconnections, the RI Upgradient Plume, which is not even shown in the FS depictions, is significant and is impacting OU1 groundwater, and the groundwater flow direction as depicted in the RI plumes has a strong southwesterly flow component that is not shown in the FS plumes.

EPA provided no justification for the differences in these two depictions of groundwater conditions nor for how they could have possibly changed over

the course of a few days, while the underlying data are the same. Furthermore, EPA presented no rationale for why they did not use information produced by their own contractor (*i.e.*, Lockheed Martin) for remedial evaluation and instead relied on the US ACE contractors' (HDR and O'Brien & Gere) plume depictions. These differing groundwater plume interpretations are evidence of the inadequate groundwater characterization in OU1 and a clear indication that EPA has no conception of where the plumes are truly located. Because of the inadequate characterization, the FS is not compliant with the NCP. There is no plausible way by which EPA or its consultants could have considered the impact of its proposed remedy on the NCP-specified evaluation criteria, such as impact on human health and the environment, effectiveness, permanence, cost, compliance with ARARs, reduction in mobility, *etc.*, without agreement or certainty regarding where the plumes were located and in which direction they flowed. EPA's characterization of groundwater conditions, on its face, is arbitrary and not supported by substantial evidence.

C. EPA's failure to consider the significant amount of critical data is arbitrary and inconsistent with the NCP

Groundwater and soil data have been collected over a period greater than three decades in areas both within and upgradient of OU1. More than 7,400 soil and groundwater samples have been collected from over 1,100 locations within and adjacent to the NCIA, OU1, and the Upgradient Plume. Consideration of these data is crucial for understanding the source(s) of the current OU1 groundwater plumes and the fate of the plumes over time. Some of the data not considered by EPA include over 2,500, 150, and over 2,500 groundwater samples collected from locations within the NCIA, OU1, and the Upgradient Plume, respectively.

Despite the presence of a significant amount of data near and upgradient of OU1, EPA has arbitrarily relied on a limited and unrepresentative dataset in the development of its CSM for OU1 and in the development of the proposed remedy. These data are critical for understanding the location and characteristics of source(s) of plumes that originate from the NCIA and the Upgradient Parties, the chemical signature of the plumes at the source areas, and the fate and transport characteristics of these plumes as they migrate into OU1.

EPA's decision to not conduct a comprehensive RI for OU1 is not only inconsistent with the NCP, but the agency's failure to consider decades of environmental data compounded the problem and has resulted in the flawed CSM that is expected to lead to an ineffective remedial design.

2. EPA's flawed proposed remedy and PDI are a result of EPA's arbitrary actions

EPA's proposed OU1 remedy is based on a flawed CSM that incorrectly assumes that there are discrete plumes within OU1. Given that the Site has not been adequately characterized and the proposed remedy is based on a flawed CSM, the proposed PDI fails to address significant data gaps necessary for adequately defining groundwater quality, which is needed for an effective remedy design. The CSM is flawed because available data indicate that within OU1 the Eastern and Central plumes migrate to the south and southwest, and commingle. Additionally, data indicate the Upgradient Plume flows into OU1 and commingles with the Eastern Plume. These CSM flaws were discussed in detail in comments to the EPA's Proposed Remedial Action Plan (PRAP) previously filed by IMC Eastern, Corp. (Gradient, 2013) and Gradient's Comments to the UAO on behalf of IMC and ITC's dated April 25, 2018. As further detailed in those attached comments, EPA's actions in ignoring critical data are arbitrary because:

a. EPA's CSM ignores the southwestern migration of the OU1 Eastern Plume and, as a result, the PDI proposes no data collection in this area – a key data gap that needs to be filled for the design of an effective remedy,

b. EPA's flawed CSM ignores the commingling of the OU1 Eastern and Central Plumes, and as a result, the PDI proposes no data collection in this area – another key data gap that needs to be filled for the design of an effective remedy,

c. EPA's flawed CSM ignores the impacts to OU1 groundwater caused by the Upgradent Plume and other upgradient sources, and as a result, the PDI proposes no data collection in this area – a key data that needs to be filled for the design of an effective remedy,

d. EPA's flawed CSM has mistakenly attributed impacts in the western portion of OU1 to the NCIA Western Plume parties,

e. EPA's flawed CSM and flawed PDI will leave significant data gaps unaddressed, and the resulting remedy will not efficiently address contaminant mass in OU1, and

f. Recent groundwater data from OU3 corroborate that EPA's CSM is flawed and the proposed remedy is expected to be ineffective.

3. <u>The remedy selection process used by EPA is arbitrary and not complaint with the NCP because it fails to consider Site-specific information indicating the remedy will fail and/or be significantly more expensive than anticipated</u>

The preferred remedy identified in the ROD (EPA Region II, 2013) was selected with a process that is inconsistent with the NCP. Specifically, EPA has not adequately demonstrated that the selected remedy will be effective or cost-effective, two specific evaluation criteria required by the NCP. In fact, the same remedial technology has already failed at one location at the Site and at another

location nearby was demonstrated to be significantly more expensive than originally anticipated.

EPA has proposed to use in-well vapor stripping in OU1 as part of the remedy designed to remove chlorinated solvents from groundwater where prior reports identify the characteristics of the aquifer are not optimal for this technology. Furthermore, after operating an in-well vapor stripping well just east of the NCIA and OU1 for roughly 6 years, a consultant for GI/Vishay concluded that heterogeneities within the Aquifer made this an unsuitable remedial technology for this Site. EPA also fails to consider in-well stripping literature guidance, prior New York State consultant's conclusions about the effectiveness of the technology, and information on Site-specific applications of the technology including six years of unsuccessful attempts to implement in-well vapor stripping in the Magothy Aquifer. As a result of EPA's arbitrary actions, the remedy evaluation and selection process presented in the FS and the ROD is incomplete and inconsistent with the NCP.

EPA did not adequately respond to IMC and ITC's April 25, 2018 Comments

In responding to IMC and ITC's April 25, 2018 Comments, EPA did little more than reiterate its previous, insufficient responses. Although EPA took more than the few days it previously did to respond to IMC's and the joint comments to the Proposed Plan, the substance was the same. Rather than actually try to understand the Site and the data generated, it intends to rely on the Pre-Design Investigation to figure out what is happening at the Site.

- IMC and ITC highlighted the significantly differing plume depictions prepared by EPA and other federal government contractors in the SRI and SFS, two NCP-required reports, as evidence of EPA's failure to understand and characterize groundwater conditions within OU1. EPA provided three different justifications in their May 17, 2018 response to comments why the plume depictions in the SRI and SFS are different. The justifications provided by EPA are unresponsive to the original IMC and ITC comments and defy logic as presented below.
    - EPA suggests the plume depictions are different as result of the differing purposes of each document. The SRI, as EPA states in their letter, was intended to "develop the Site CSM using available data and to make recommendations for future activities…", whereas the SFS was intended "to evaluate remedial alternatives for a discrete portion (*i.e.* OU1) of the overall Site." Despite EPA's apparent belief that groundwater conditions and plume depictions can change based on the purpose of their reports, groundwater flow and solute transport obey the fundamental rules of physics. Thus, characterization of groundwater flow conditions and contaminant migration in OU1 is not dependent upon whether EPA is developing a CSM or evaluating remedial alternatives. In other words,

EPA's study directives should have no bearing on the data analysis and interpretation.

- EPA also suggests that the plumes are different because the SRI plotted plume extents for 5 different depth intervals, from 50 ft-bgs to 500 ft-bgs, while the SFS plotted plume extents for only 3 different depth intervals, from 150 ft-bgs to 285 ft-bgs. It is implausible that the depth intervals considered could so starkly affect the delineation of the plume.[2] Furthermore, EPA's response raises the question of why EPA would consider only a subset of the available depth information for the SFS plume depictions, a document that in EPA's own words is intended "to evaluate remedial alternatives". This clearly shows that groundwater data from deeper than 285 ft-bgs was not considered in the SFS evaluation of remedial alternatives – a further indication that EPA arbitrarily disregarded substantial evidence of the flow of groundwater and transport of contaminants within OU1 and therefore the remedy was evaluated and selected inappropriately.
- EPA's justification of the different plume depictions in the SRI and the SFS defies the basic tenets of contaminant fate and transport physics. The SRI presents 100 µg/L plume depictions for PCE and TCE while the SFS presents 5 µg/L plume depictions for PCE and TCE (as noted by EPA). EPA points to this difference to justify why the SRI and the SFS plume depictions were different. However, EPA failed to recognize that the SFS not only presents a 5 µg/L plume delineation but also a 100 µg/L plume delineation. The IMC and ITC Comments dated April 25, 2018, compared the 100 µg/L plume extent from the SFS to the 100 µg/L plume extent from the SRI – an "apples to apples" comparison (see Figure 2 of IMC and ITC Comments). Thus, since the same concentration (100 µg/l) was used to depict the plumes (on Figure 2 of the IMC and ITC comments), the spatial extent of the SRI and SFS plumes should have been comparable, yet they are not. As contaminant plumes spread with groundwater flow and hydrodynamic dispersion, contaminant concentrations decrease with increased distance from the source, and the area with lower concentrations (diluted plume) is much larger than the area with higher concentrations (source). EPA and its contractors showed the 5 µg/L plume delineation in the SFS to be much smaller than the 100 µg/L plume delineations presented in the SRI, which is not possible and defies the basic underlying physics of how contaminants behave in groundwater – foundational knowledge that has been well understood for decades (*e.g.*, Freeze and Cherry, 1979). This further demonstrates that EPA arbitrarily failed to consider substantial evidence concerning the groundwater and contaminant transport

[2] See Figure 2 from the IMC and ITC Comments Regarding US EPA's Unilateral Administrative Order for Remedial Design dated April 25, 2018 in which SRI and SFS 100 µg/L plume footprints from each depth interval are combined to present an overall plume impact for all depths.

conditions within OU1 and has not developed an adequate CSM that can be used to evaluate remedial alternatives.

- IMC and ITC presented data in their joint comments regarding EPA's Unilateral Administrative Order for Remedial Design demonstrating that EPA mistakenly attributed impacts in the western portion of OU1 to the NCIA Western Plume parties. EPA disagreed with this conclusion and highlighted several data points from the western portion of OU1 and the NCIA to support their views. However, EPA has misinterpreted the data. The data cited by EPA actually provide evidence, as summarized below, that the NCIA Western Plume never migrated, even at its maximum historical extent, south of Old Country Road into OU1 or the New Cassel Hicksville Groundwater Superfund Site – areas where EPA is focusing its investigation and remedial efforts.
    - GHWP-01 was cited by EPA as evidence of the NCIA Western Plume migration into OU1. However, impacts at GHWP-01 were caused by the NCIA Central Plume, not the NCIA Western Plume, as evidenced by the elevated concentration of 1,1,1-TCA (790 µg/L) that was detected in January 2000. 1,1,1-TCA is, and has always been, an indicator of the Central Plume. Furthermore, GHWP-01 is located directly downgradient (*i.e.*, southwest) of the Central Plume parties (Gradient, 2013).
    - GHWP-03 was also cited by EPA as evidence of the NCIA Western Plume migration into OU1. However only relatively low concentrations of PCE and TCE were detected at GHWP-03 (less than the EPA remediation threshold of 100 µg/L) during sampling in February 2000. Additionally, this location is located north of Old Country Road and north of the New Cassel Hicksville Groundwater Superfund Site boundary. Thus, GHWP-03 is likely located near the maximum historical downgradient extent of the NCIA Western Plume and provides further evidence that the NCIA Western Plume never migrated, even at its maximum historical extent, south of Old Country Road into OU1 or the New Cassel Hicksville Groundwater Superfund Site.
    - N-10324 and N-11850 were also cited by EPA as evidence of NCIA Western Plume migration. Both of these wells are located near the southern boundary of the NCIA. Monitoring was performed at N-10234 between 1985 and 1999; the maximum PCE concentration detected was 130 µg/L and the maximum TCE concentration detected was 69 µg/L. Monitoring has been performed at N-11850 between 1991 and 1999; the maximum PCE concentration detected was 110 and the maximum TCE concentration detected was 44 µg/L. Furthermore, concentrations at these wells have declined dramatically over time. When sampled for the final time in 1999, PCE and TCE concentrations in both wells had declined to approximately 20 µg/L or less. Due to the relatively low concentrations detected historically at these two locations, these wells are likely located near the maximum downgradient extent of the NCIA Western Plume and provide further evidence that NCIA Western Plume

never migrated, even at its maximum historical extent south of Old Country Road into OU1 or the New Cassel Hicksville Groundwater Superfund Site.

- EPA has stated that they disagree with IMC and ITC's conclusions that the Eastern Plume and Central Plume commingle – a conclusion that IMC and ITC reached on the basis of chemistry data from within OU1, which has been presented on numerous occasions to EPA, but has not yet been addressed or refuted by EPA. Moreover, EPA has stated that to the extent that there is commingling of the Eastern and Central Plumes it's only a liability issue and doesn't affect the remedy. This is fundamentally false. Understanding the spatial and vertical location of the groundwater plumes is a critical requirement of any remedial action and a foundational requirement of the NCP. To suggest otherwise contradicts decades of guidance provided by EPA.
- EPA has stated that they disagree with IMC and ITC's conclusions regarding the southwesterly component of groundwater flow within OU1 - a conclusion that is based on previous groundwater elevation data collected within OU1 and which is supported by groundwater plume depictions prepared by the NYSDEC and Lockheed Martin, EPA's own consultant. EPA had further stated that groundwater level gauging will be the initial step of the PDI and the resulting data will be used to finalize the RD. However, groundwater flow direction is a fundamental data requirement for any groundwater remedial action that should have been addressed as part of the RI. The uncertainty in groundwater flow direction that still exists at the Site further demonstrates that EPA failed to consider substantial evidence resulting in a proposed CSM and remedy that are flawed and unreliable.
- EPA has stated that they disagree with IMC and ITC's conclusions regarding the commingling of the Upgradient Plumes with the Eastern Plume. During multiple comment submittals and in numerous meetings, consultants for IMC and ITC have identified extensive evidence indicating that the Upgradient Plumes flow into OU1. This evidence includes chemical fingerprinting, vertical profile sampling results for PCE and TCE, and GI/Vishay's own groundwater modeling results (which shows Upgradient Plumes flowing into OU1). EPA has indicated that they have submitted comments to the ACOE regarding the RI for OU2 but neither these comments nor the ACOE's RI have been provided to IMC. EPA has also indicated, if during the OU2 RI there is evidence that the Upgradient Plume has impacted OU1 groundwater, they will take appropriate response actions. However, it is unclear what additional data EPA would need, that doesn't already exist, to demonstrate the impact of the Upgradient Plume on OU1 groundwater quality. Again, EPA's failure to consider substantial evidence of comingling of the plumes is arbitrary and contrary to the NCP.
- EPA has relied on OU3 data downgradient of OU1 and has indicated that the data "do not conflict with EPA's understanding of groundwater flow within this area or with the CSM as presented in the OU1 ROD". The detection of 8 ppm of PCE in OU3 substantially outside the 0.01 and 0.005 ppm PCE isopleths

clearly conflicts with EPA's stated understanding and demonstrates once again EPA's failure to consider substantial evidence. EPA has not provided all available OU3 data. While EPA has provided the location of vertical profile borings that were installed and the maximum concentrations detected, they have not provided all sample results from all depth intervals – critical information necessary in order to assess EPA's claims and to develop an accurate CSM. In addition, an examination of the OU3 groundwater quality data provided by EPA demonstrates that the Upgradient Plume, which is TCE dominant, continues to flow through OU1 and has reached the eastern portion of OU3. These data further demonstrate that the Upgradient Parties should be named as PRPs for OU1 and OU3, but EPA continues to ignore these data.

IMC has sufficient cause to refuse to comply with the UAO because its liability, is divisible

Liability under CERCLA is not joint and several where the harm caused by a party is divisible because the harm is distinct or there is a reasonable basis for apportionment. *See* BNSF v. United States, 556 U.S. (2009).

The NCIA Western plume is shallow, groundwater concentrations attenuate rapidly with depth on the NCIA Western Plume properties, and the NCIA Western Plume never reached OU1, a conclusion affirmed by the NYSDEC in the 2003 ROD for off-site groundwater and continually commented on by IMC. See e.g., IMC comments dated May 9, 2011. This conclusion was reached prior to completion of source control at the sites in the western portion of the NCIA.

As EPA is aware, the 2003 ROD explicitly concluded that the Western Plume is shallow and has only affected the upper portions of the aquifer. ROD, p. 18. In fact, the highest PCE and TCE concentrations detected within the NCIA Western Plume were found at depths ranging from 50-85 ft. bgs, approximately the top 35 ft. of the water column and such concentrations attenuate significantly with depth. As reported in the ROD, the maximum PCE concentration detected in the downgradient NCIA Western Plume south of Old Country Road was only 1 µg/L, TCE was not even detected and the maximum total VOC concentration was 3 µg/L. In fact, the downgradient extent of the Western Plume was limited even before source remediation actions were undertaken at the Western Plume properties identified by NYSDEC. Furthermore, as a result of the aggressive source remedial actions and natural flushing of the aquifer, PCE and TCE concentrations in the NCIA Western Plume have attenuated significantly over the past 20 years. Due to this rapid attenuation over time, the current extent of the NCIA Western Plume is contained entirely within the NCIA and does not enter either OU1 or the NCHGW Site. As has been made clear to EPA, the NCIA Western Plume even at its maximum extent was shallow and limited in special extent and has been aggressively remediated. Thus, IMC's liability is undeniably divisible.

IMC has sufficient cause to refuse to comply with the UAO because it has insufficient assets to comply

Explicit in EPA's own guidance document, Guidance on CERCLA Section 106(a) Unilateral Administrative Orders for Remedial Designs and Remedial Actions (OSWER Directive Number 9833.0-1a 1990), it is EPA's obligation to assess whether a party has sufficient financial resources to comply with a UAO prior to issuance. Furthermore, the guidance provides, the UAO should not include parties lacking any substantial resources, unless the activities required of the party do involve expenditures of money. As EPA is aware, IMC has repeatedly indicated to EPA that it ceased operations in 1995 and has no assets or personnel with which to perform the obligations set forth in the UAO. IMC has provided notification that it has insurance subject to a reservation of rights dated September 8, 2008, (copy attached hereto) Bates IMC 9660-9663. It has no income from which to pay remedial costs and no employees to oversee the implementation of Remedial Design activities. It cannot meet any financial assurance requirement set forth in the UAO.

Very truly yours,

Robert R. Lucic